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ABSTRACT

The fall semester's academic performance of forty minority students who had taken part in an eight-week summer Health Careers Opportunity Program (HCOP) is reported on in this paper. HCOP student performance is also compared with a control group of comparable students who had applied to the program, but were not accepted or who declined the offer to participate. Results, presented in two tables, indicate that, for students of approximately equal academic aptitude (defined by ACT score means), HCOP students are performing at higher levels and are also more likely to be enrolled in science-related course work than are the control group students. (KH)

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THE EFFECTS OF A SUMMER ENRICHMENT PROGRAM ON THE ACADEMIC PERFORMANCE OF MINORITY AND DISADVANTAGED STUDENTS IN THE FOLLOWING SEMMESTER

BY

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UD023938

The Effects of a Summer Enrichment Program on the Academic Performance of Minority and Disadvantaged Students in the Following Semester

Problem Evaluations of enrichment programs designed to increase content knowledge and academic effectiveness of minority and disadvantaged students have typically shown positive results.[1-4] However, these programs fail to report the extent to which student gains are maintained during the regular academic year. In addition, comparable control groups have not been used. There are two purposes for this study. First, to report on the fall semester's academic performance of 40 minority students who completed an eight-week Health Careers Opportunity Program (HCOP). Second, to compare HCOP student performance with a control group of comparable students who had applied to the program, but who were not accepted or who declined the offer to participate.

Method A follow-up evaluation questionnaire was designed to determine how HCOP students were performing in their course work, to determine perceptions of program benefits on academic performance, and to assess desire and determination to pursue health-science careers.

A total of 40 students were selected to participate in the eight-week summer enrichment program. For instructional purposes, participating students were divided into two groups. Level I (N=25) consisted of recent high school graduates or rising high school seniors. Level II (N=15) was composed of college undergraduates. Control groups of comparable minority applicants interested in the health-sciences, but who were not admitted, were constructed in the following manner: First, all non-admitted applicants were assigned a number. Second, a table of random numbers was used to draw a list of numbers for each control group. Third, non-admitted applicants whose number

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matched the random number lists were selected for the control samples.

A total of 100 control group questionnaires were sent, 60 to high school applicants (Level I) and 40 to college applicants (Level II). Questionnaires were also sent to all HCOP summer program students.

Results Return Rate. The return rates for the HCOP group were higher than for the control group at both levels. The overall return rate for the HCOP group was 78.9% (Level I = 86.4%; Level II = 68.8%). The overall return rate for the Control group was 33.0% (Level I = 35.0%; Level II = 30.0%).

Level I The results of the follow-up questionnaire for Level I HCOP and Control groups are presented in Table 1. Three findings are of interest. (1) The mean GPA and course mean grades for all four of the courses offered in the summer are higher for the HCOP group, although the differences are not statistically significant. (2) More HCOP students report taking science and mathematics courses. More Control group students report taking English courses. (3) The mean ACT scores are not significantly different for the two groups.

Level II The results of the follow-up questionnaire for Level II HCOP and Control groups are presented in Table 2. The three main findings are similar to the Level I results. (1) The mean GPA and course mean grades for all of the HCOP summer program courses are higher for the HCOP group, with the differences in the mean GPA and mean biology grade reaching statistical significance. (2) More HCOP students report taking biology and chemistry; more Control students report taking English and mathematics. (3) The mean ACT scores for the two groups are not statistically different.

Interpretation These three findings for each level indicate the continuing impact of the HCOP summer program on the students. That is, for students of approximately equal academic aptitude, defined by ACT score means, HCOP students are performing at higher levels and are also more likely to be enrolled in science-related course work than are the Control group students.

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Table 1

Comparison of Level I

HCOP Students and Control Students

	HCOP	CONTROL
CURRENT GPA		
Mean	3.44 (19)	3.30 (21)
SD	.58	.38
MDN	3.73	3.30
Range	2.2*- 4.0	2.75 - 4.0
Biology		
GPA Mean	3.41 (11)	2.96 (4)
SD	.54	.48
MDN	3.50	3.00
Range	2.5 -4.0	2.33 - 3.5
Chemistry		
GPA Mean	3.55 (10)	3.20 (5)
SD	.76	.84
MDN	4.0	3.00
Range	2.0 - 4.0	2.0 - 4.0
English		
GPA Mean	3.31 (16)	3.09 (22)
SD	.70	.68
MDN	3.00	3.00
Range	2.00 - 4.0	2.00 - 4.0
Mathematics		
GPA Mean	3.28 (18)	2.70 (15)
SD	.83	1.10
MDN	3.50	3.00
Range	2.00 - 4.0	0.00 - 4.0
ACT		
Mean	18.18 (11)	18.05 (20)
SD	4.12	6.13
MDN	18.00	16.00
Range	11.00 - 24.0	10.0 - 32.0

*NOTE: The 2.2 student reported that she is no longer interested in pursuing a career in the health sciences.

Table 2

Comparison of Level II

HCOP Students and Control Students

	HCOP	CONTROL
Current		
GPA Mean	3.12 (10)	2.64 (12)
SD	44	.42
MDN	2.96	2.71
Range	2.60 - 3.89	2.00 - 3.15
Biology		
GPA Mean	3.36 (7)	2.00 (3)
SD	.75	.00
MDN	3.50	2.00
Range	2.00 - 4.00	2.00
Chemistry		
GPA Mean	3.12 (8)	2.83 (3)
SD	.64	.76
MDN	3.00	3.00
Range	2.00 - 4.00	2.00 - 3.50
English		
GPA Mean	2.33 (3)	2.25 (8)
SD	.58	.46
MDN	2.00	2.00
Range	2.00 - 3.00	2.00 - 3.00
Mathematics		
GPA Mean	3.40 (5)	3.08 (6)
SD	.89	.66
MDN	4.00	3.00
Range	2.00 - 4.00	2.00 - 4.00
ACT		
Mean	19.20 (10)	15.64 (11)
SD	4.05	4.70
MDN	19.00	15.00
Range	12 - 26	11 - 27